Participant Questionnaire

Participant number: __17__   Date: __7/4/23__

Location: __Brescia IT__

HRC Study / Algorithms tested: __CAMP, STAP-PPF__

Study Conducted by: __Jared Flowers__

Participant link lengths/dimensions: (**meters**, "spine" is pelvis to shoulder midpoint, "shoulders" is shoulder to shoulder)

Spine			Left Upper Arm	.4		Right Upper Arm	.38
Neck			Left Forearm	.25		Right Forearm	.26
Shoulders	.24						

Participant joint diameter: (**meters**)

Left Elbow	.087		Right Elbow	.09
Left Wrist	.058		Right Wrist	.06

Questions:

A. How safe did you feel? (0 is not safe at all, 5 is neutral, 10 is very safe)

B. Do you think the robot hindered your motions during the task? (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

C. Did the robot perform logical motions? (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

D. What is your overall satisfaction with the HRC task? (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

For Task 1 (engine parts): (circle your answer to each question)

Task 1, Method 1:   2

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ~~8~~ | 9 | 10 |

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~~10~~ |

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ~~8~~ | 9 | 10 |

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

| 0 | 1 | 2 | 3 | ~~4~~ | 5 | 6 | 7 | 8 | 9 | 10 |

Task 1, Method 2:   1

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

| 0 | 1 | 2 | 3 | 4 | 5 | ~~6~~ | 7 | 8 | 9 | 10 |

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ~~8~~ | 9 | 10 |

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

| 0 | 1 | 2 | 3 | ~~4~~ | 5 | 6 | 7 | 8 | 9 | 10 |

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | ~~7~~ | 8 | 9 | 10 |

Task 1, Method 3:   3

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | ~~9~~ | 10 |

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | ~~10~~ |

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | ~~8~~ | 9 | 10 |

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

| 0 | 1 | 2 | 3 | 4 | ~~5~~ | 6 | 7 | 8 | 9 | 10 |

Comments: 1st method (2) most efficient, hardest to track with gaze → not so safe
2nd & 3rd (1 & 3) methods too slow for application

Experience: 10

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For Task 2 (Sharework parts: metal tabs, cylinders, pallets): (circle your answer to each question)

Task 2, Method 1:   2

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

0	1	2	3	4	5	6	7	~~8~~	9	10

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

0	1	2	3	4	5	6	7	~~8~~	9	10

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

0	1	2	3	4	5	6	7	~~8~~	9	10

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

0	1	2	3	4	~~5~~	6	7	8	9	10

Task 2, Method 2:   1

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

0	1	2	3	~~4~~	5	6	7	8	9	10

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

0	1	2	3	4	5	6	~~7~~	8	9	10

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

0	1	2	3	~~4~~	5	6	7	8	9	10

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

0	1	2	3	4	5	6	~~7~~	8	9	10

Task 2, Method 3:   3

Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)

0	1	2	~~3~~	4	5	6	7	8	9	10

Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)

0	1	2	3	4	5	6	~~7~~	8	9	10

Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)

0	1	2	3	4	~~5~~	6	7	8	9	10

Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

0	1	2	3	~~4~~	5	6	7	8	9	10

Comments: T2-m4: A3 B6 C6 D4

T2-m5: A3 B6 C4 D on4

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